

Attorney Docket No.: 0160112
Application Serial No.: 10/799,533

REMARKS

This is in response to the *Final* Office Action of June 27, 2008, where the Examiner has rejected claims 1-11, 13, 15, 17-27, 29, 31, 33-36, 39-43, 46, 48, 49 and 51-56. An early allowance of outstanding claims 1-11, 13, 15, 17-27, 29, 31, 33-36, 39-43, 46, 48, 49 and 51-56 in view of the following remarks is requested.

A. Rejection of Claims 1, 3-5, 7-11, 13, 15, 17, 19-21, 23-27, 29, 31, 33-36, 39-43, 46, 48, 51, 53 and 55 under 35 USC § 103(a)

The Examiner has rejected claims 1, 3-5, 7-11, 13, 15, 17, 19-21, 23-27, 29, 31, 33-36, 39-43, 46, 48, 51, 53 and 55, under 35 USC § 103(a), as being unpatentable over Bergstrom, et al. (USPN 5,809,459) ("Bergstrom") in view of Andersen, et al. (PGPUB 2006/0153286) ("Andersen"), and further in view of Zinser, Jr. et al. (USPN 6,138,092) ("Zinser") and Kaajas, et al. (PGPUB 2004/0138874) ("Kaajas").

Applicant acknowledges and appreciates the Examiner's thorough response to applicant's arguments in the previous response to office action. As confirmed by the Examiner, Bergstrom, Andersen and Zinser, all fail to disclose, teach or suggest that the voicing index provides a filter cut-off frequency that is above 4 kHz. However, the Office Action states that Kaajas discloses that the "filter cut-off frequency is above 4 kHz," as recited in independent claim 1. Applicant respectfully disagrees.

The Office Action relies upon the disclosure at paragraph [0019] of Kaajas for the proposition that Kaajas discloses the missing elements in three other references, i.e. Bergstrom, Andersen and Zinser. Paragraph [0019] of Kaajas, in part, reads:

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According to the invention, a low-bandwidth (or narrow bandwidth) audio signal, e.g. speech signal, is first processed in order to expand the bandwidth of the audio signal; this takes place in a bandwidth expansion block 20. The obtained high-bandwidth (or expanded bandwidth) audio signal is then further processed for spatial reproduction; this takes place in a spatial processing block 30, which preferably produces a stereophonic binaural audio signal. The low-bandwidth audio signal can be obtained e.g. from a transmission path of a telecommunications system via an audio decoder, such as a speech decoder 10, if the audio signal is transmitted in a coded form. However, the source of the low-bandwidth audio signal received at block 20 is not relevant to the basic idea of the invention. Furthermore, the terms 'low-bandwidth' or 'narrow bandwidth' and 'high-bandwidth' or 'expanded bandwidth' should be understood as descriptive and not limited to any exact frequency values. Generally the terms 'low-bandwidth' or 'narrow bandwidth' refer approximately to frequencies below 4 kHz and the terms 'high-bandwidth' or 'expanded bandwidth' refer approximately to frequencies over 4 kHz. (emphasis added.)

First, applicant respectfully submits that Kaajas discloses no more than a definition for “narrow bandwidth” and “high bandwidth,” and there is no disclosure, teaching or suggestion in Kaajas about a filter cut-off frequency, or that a filter cut-off frequency of above 4 kHz is utilized for speech encoding or decoding. Second, Kaajas is directed to a totally different invention, where the bandwidth of a narrowband audio signal is “expanded” to a highband audio signal. Applicant respectfully submits that the “expansion” of the audio signal is in fact the opposite of using a cut-off frequency for separating narrowband and wideband portions of a speech signal.

Furthermore, applicant respectfully submits that the Office Action’s reliance upon KSR is misplaced. Here, the Office Action has combined four (4) separate references, where at least, there is no teaching or suggestion (or alleged teaching or suggestion) in any of the references for combining Bergstrom, Andersen and Zinser with Kaajas to show that the voicing index provides a filter cut-off frequency that is above 4 kHz. Applicant respectfully reminds the Examiner that many inventions are the results of an inventive combination of existing elements, where each existing element performs according to its expected function. However, a *prima facie* showing

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of obviousness requires more than merely finding various elements of an invention in a multitude of references. Therefore, in addition to the reasons stated above that Kaajas fails to disclose, teach or suggest the missing elements that cannot be found in three other references, also, a *prima facie* case of obviousness has not been established, as there is no motivation or suggestion by any of the references to use the "bandwidth expansion" teaching of Kaajas to make a leap for providing a filter cut-off frequency that is above 4 kHz for inclusion in a voicing index that is transmitted from a speech encoder to a speech decoder.

Accordingly, applicant respectfully submits that claim 1 is patentably distinguishable over the cited references, and should be allowed. Further, claims 1-5, 7-11, 13, 15 and 48 depend from claim 1, and should be allowed at least for the same reasons stated above. Also, independent claims 17, 33 and 40 include limitations similar to those of claim 1, and should be allowed for similar reasons. Claims 18-21, 23-27, 29, 31, 34-36, 39, 41-43, 46, 51, 53 and 55 depend from claims 17, 33 and 40, and should also be allowed.

B. Rejection of Claims 2 and 18 under 35 USC § 103(a)

The Examiner has rejected claims 2 and 18, under 35 USC § 103(a), as being unpatentable over Bergstrom in view of Andersen, Zinser and Kaajas, and further in view of Accardi, et al. (PGPUB 2005/0055219) ("Accardi").

It is respectfully submitted that, as explained above, dependent claims 2 and 18 should also be allowed at least for the reasons stated above in conjunction with patentability of the independent claims.

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C. Rejection of Claims 6 and 22 under 35 USC § 103(a)

The Examiner has rejected claims 6 and 22, under 35 USC § 103(a), as being unpatentable over Bergstrom in view of Andersen, Zinser and Kaajas, and further in view of Gigi (USPN 6,453,283) ("Gigi").

It is respectfully submitted that, as explained above, dependent claims 6 and 22 should also be allowed at least for the reasons stated above in conjunction with patentability of the independent claims.

D. Rejection of Claims 49, 52, 54 and 56 under 35 USC § 103(a)

The Examiner has rejected claims 49, 52, 54 and 56, under 35 USC § 103(a), as being unpatentable over Bergstrom in view of Andersen, Zinser and Kaajas, and further in view of Li, et al. (PGPUB 2007/0110042) ("Li").

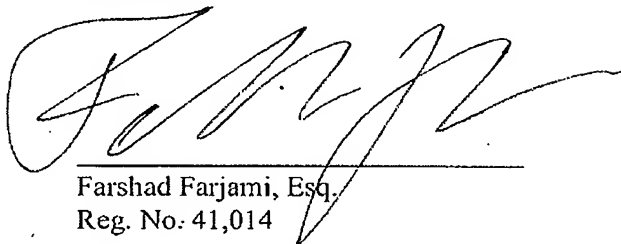
It is respectfully submitted that, as explained above, dependent claims 49, 52, 54 and 56 should also be allowed at least for the reasons stated above in conjunction with patentability of the independent claims.

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Based on the foregoing reasons, an early Notice of Allowance directed to all claims 1-11, 13, 15, 17-27, 29, 31, 33-36, 39-43, 46, 48, 49 and 51-56 pending in the present application is respectfully requested.

Respectfully Submitted,
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